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DESCRIBES TIBON, NEW TUBERCULOSIS REMEDY

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The thiosemicarbazone of para-acetaminobenzaldehyde, called Tibon for short, has been introduced recently as a remedy for tuberculosis. It was synthesized in 1949 at the All-Union Scientific Research Chemicopharmaceutical Institute imeni S. Ordzhonikidze. An analogous substance, Tubin, was synthesized by the Tuberculosis Institute of the Academy of Medical Sciences USSR.

The preparation is a greenish-yellow powder which is insoluble in water, alcohol, and the usual organic solvents. It is administered as a powder, in the form of tablets, or in dragees, and also intrapleurally and locally in various suspensions (oil, glycerine, physiological solution).

The activity of this preparation against tuberculosis bacilli was determined by experimental investigations with dilutions from 1:5,000 to 1:211,000. The study of the preparation under other experimental conditions showed an even greater activity of the thiosemicarbazone against tuberculosis bacilli in a dilution of 1:4,000,000.

Tibon was tested in clinics and departments of the Tuberculosis Institute of the Academy of Medical Sciences USSR and at the Yakutsk branch of the institute. Part of the observations was carried out at the "Zakhar'ino," "Mytishchi," "Vysokie Gory" tuberculosis hospitals, and at the Central Railroad Transport Hospital imeni Semashko.

The preparation exerts a therapeutic effect chiefly in extrapulmonary tuberculous diseases; treatment with Tibon is therefore indicated in fresh infiltrative and ulcer-producing tuberculosis of the throat, tuberculosis of the mucous membranes of the mouth, of the bladder, of the intestines, of the lymphatic nodes, in tuberculous peritonitis (especially in fresh cases) and polyserositis, and in tuberculous empyema.

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A definite effect (reduction of toxic effects, dissolution of formations of an inflammatory nature) was noted in treating infiltrative pneumonic processes with Tibon, when the use of other methods had proved ineffective. In tuberculous lupus cases, internal use of the preparation over long periods had extremely promising results.

The thiosemicarbazone has toxic properties which are observed sometimes even upon the usage of small doses, 0.01 /grams?/. Its administration is usually accompanied by headache, nausea, loss of appetite, abdominal pains, and dermatitis. Large doses can have unfavorable effects on the bone marrow (appearance of agranulocytosis). For this reason, attention must be given to the correct dosage. The physician must fix the doses strictly according to individual requirements.

The Tuberculosis Institute of the Academy of Medical Science, USSR has developed the following schedule for the use of Tibon: for the first week, the dose for adults, administered internally in powder form, is fixed at 0.01 to 0.025, to be taken twice within a 24-hr period. In the absence of secondary effects, the dose is increased to 0.05 twice a day during the second and the third week. From the fourth week until the end of the treatment, the dose is set at 0.1 to 0.15 twice a day. It is recommended that Tibon be administered at mealtime and that it be followed by water or tea or stewed fruit. Tibon treatment of cases of tuberculosis of the throat and tuberculosis of the intestines takes 2-4 months. Sometimes, when smaller doses -- 0.025 to 0.05 -- are administered, the cure takes longer. The quantity of the preparation required for the complete treatment of a tuberculosis case is 10-12 gr. During the time Tibon is administered, no analgesic preparations, such as pyramidon or barbiturates, and no narcotics must be given. During treatment, the patient must not be given herring or cheese, in order to avoid secondary effects, in particular allergic reactions. Tibon should be administered to children with great care; with the appearance of secondary effects, the treatment must be discontinued.

In treating tuberculous empyema, a 1% suspension of Tibon is administered. Preliminary washing of the pleural cavity with physiological solution is necessary.

To prepare a sterile suspension of Tibon for intrapleural use, the preparation is ground, the required quantity being weighed in and sterilized in a drying chamber at 150°C for 1½ hr. The sterile powder is dropped into a previously filtered sterilized liquid (water, oil, or glycerin), and agitated. Since the Tibon suspension precipitates in any liquid, it must be shaken thoroughly before use. No more than 0.3 gr (in 30 ml of liquid) should be introduced into the pleura.

Experimental investigations showed the effectiveness of combining the thiosemicarbazone and streptomycin in treating animals infected with tuberculosis.

In cases exhibiting tuberculosis of the throat, a combination of treatment by Tibon with administration of streptomycin and PASK /para-aminosalicylic acid/ can be recommended on the basis of clinical observations. It is known that in these cases streptomycin does not always have the proper effect. In such cases, Tibon with PASK (8.0 to 12.0 per 24-hr period) or Tibon with streptomycin (0.5 per 24-hr period) can be administered. In cases of cheesy pneumonia, the use of either streptomycin or PASK alone usually does not have a protracted effect, and the use of combination treatment with Tibon is therefore expedient.

Although this preparation, as far as its effectiveness is concerned, is inferior to streptomycin and even to PASK, the therapeutic effect obtained in extrapulmonary localized tuberculosis cases, especially in tuberculosis of the throat, nevertheless forms a basis for recommending it on these grounds.

The medical industry has successfully taken up the production of Tibon in sufficient quantities.

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